F-SWNT + H<sub>2</sub>N-(CH<sub>2</sub>)<sub>n</sub>-C-O-R 
$$\xrightarrow{\text{Py, 150°C}}$$
 SWNT-[N-(-CH<sub>2</sub>)<sub>n</sub>-C-OR]<sub>n</sub>

1 2 3

wherein  $R = -CH_3$ ,  $-CH_2CH_3$ , etc.

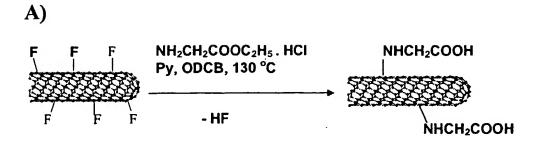
## Scheme 1

<sup>\*</sup>e.g., hydrolysis performed with a 50%/50% v/v water-ethanol solution comprising an alkalai carbonate or bicarbonate

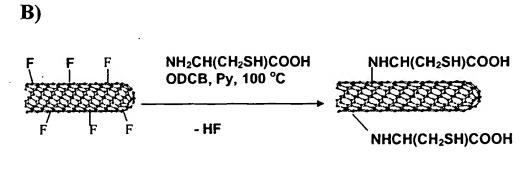
SWNT + HO-C-CH<sub>2</sub>CH<sub>2</sub>-C-O-C-CH<sub>2</sub>CH<sub>2</sub>-C-OH 
$$\xrightarrow{\text{heat}}$$
 SWNT-(CH<sub>2</sub>CH<sub>2</sub>-C-OH)<sub>n</sub> + CO<sub>2</sub>

5 6 7

## Scheme 2



"Glycine-nanotubes"



"Cysteine-nanotubes"

Fig. 3